AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Claims 1-12 (cancelled).

13. (New) A sensor for measuring a physical property of an oxygen concentration or a temperature in exhaust gas of an internal combustion engine in a motor vehicle, comprising:

a housing;

a measuring element accommodated in the housing, the measuring element having an end section used for contacting that protrudes from the housing;

a connector plug mounted on the end section; and

a housing shell which covers the end section and a connector plug with a radial clearance, the housing shell having a first shell end that is attached to the housing, and a second shell end that is sealed;

wherein a free space present inside the housing shell is completely filled with a material.

14. (New) The sensor as recited in claim 13, wherein the material is filled in as a bulk material.

15. (New) The sensor as recited in claim 14, wherein the material is a non-conductive, inorganic material in the form of a granulate.

16. (New) The sensor as recited in claim 15, wherein the material is one of quartz sand or granulated corundum.

17. (New) The sensor as recited in claim 13, wherein, after the material is filled in, a molded body is introduced into the housing shell to seal the second

shell end of the housing shell facing away from the housing, connecting cables connected to the connector plug being passed through the molded body.

18. (New) The sensor as recited in claim 17, wherein the housing shell and the molded body are radially pressed together.

19. (New) The sensor as recited in claim 13, wherein the material is a temperature-resistant, porous foam.

20. (New) The sensor as recited in claim 19, wherein orthosilicic acid (H_4SiO_4) is used as a foam-forming material, the molecules of which assume a colloidal structure when water is split off and silicon dioxide chain molecules are formed.

21. (New) The sensor as recited in claim 20, wherein the second shell end of the housing shell facing away from the housing is occluded by a molded body, through which the connecting cables connected to the connector plug are passed, and an upper radial borehole, which is situated above the connector plug, and a lower radial borehole, which is situated below the connector plug and is used for introducing the foam-forming material, are positioned in the housing shell.

22. (New) The sensor as recited in claim 21, wherein the lower borehole is sealed, after the introduction of the foam-forming material.

23. (New) The sensor as recited in claim 22, wherein the lower borehole is welded shut.

24. (New) The sensor as recited in claim 21, wherein a diameter of the lower borehole is approximately 1 mm to 3 mm.

25. (New) The sensor as recited in claim 13, wherein the housing shell is attached in a gas-tight manner to the housing.

26. (New) The sensor as recited in claim 25, wherein a shell edge of the housing shell is welded to the housing.